

SEQUENCE LISTING

<110> BURKART, MICHAEL D.  
LACLAIR, JAMES J.

<120> COMPOSITIONS AND METHODS FOR ANALYSIS AND MANIPULATION OF  
ENZYMES IN BIOSYNTHETIC PROTEOMES

<130> 26774-14255/US

<140> 10/561,108  
<141> 2006-05-11

<150> PCT/US2004/019568  
<151> 2004-06-17

<150> 60/479,344  
<151> 2003-06-17

<160> 22

<170> PatentIn version 3.5

<210> 1  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
consensus sequence

<220>  
<221> MOD\_RES  
<222> (1)..(1)  
<223> Asp, Glu, Gln, Gly, Ser, Thr, Ala, Leu, Met, Lys, Arg or His

<220>  
<221> MOD\_RES  
<222> (2)..(2)  
<223> Leu, Ile, Val, Met, Phe, Tyr, Ser, Thr, Ala or Cys

<220>  
<221> MOD\_RES  
<222> (3)..(3)  
<223> Gly, Asn or Gln

<220>  
<221> MOD\_RES  
<222> (4)..(4)  
<223> Leu, Ile, Val, Met, Phe, Tyr, Ala or Gly

<220>  
<221> MOD\_RES  
<222> (5)..(5)  
<223> Asp, Asn, Glu, Lys, His or Ser

<220>  
<221> MOD\_RES  
<222> (7)..(7)  
<223> Leu, Ile, Val, Met, Ser or Thr

<220>  
<221> MOD\_RES  
<222> (8)..(8)  
<223> Any amino acid except Pro, Cys, Phe or Tyr

<220>  
<221> MOD\_RES  
<222> (9)..(9)  
<223> Ser, Thr, Ala, Gly, Cys, Pro, Gln, Leu, Ile, Val, Met or Phe

<220>  
<221> MOD\_RES  
<222> (10)..(10)  
<223> Leu, Ile, Val, Met, Ala, Thr or Asn

<220>  
<221> MOD\_RES  
<222> (11)..(11)  
<223> Asp, Glu, Asn, Gln, Gly, Thr, Ala, Lys, Arg, His, Leu or Met

<220>  
<221> MOD\_RES  
<222> (12)..(12)  
<223> Leu, Ile, Val, Met, Trp, Ser, Thr or Ala

<220>  
<221> MOD\_RES  
<222> (13)..(13)  
<223> Leu, Ile, Val, Gly, Ser, Thr, Ala, Cys or Arg

<220>  
<221> MOD\_RES  
<222> (14)..(15)  
<223> Any amino acid

<220>  
<221> MOD\_RES  
<222> (16)..(16)  
<223> Leu, Ile, Val, Met, Phe or Ala

<400> 1  
Xaa Xaa Xaa Xaa Xaa Ser Xaa  
1 5 10 15

<210> 2  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 2  
Met Ala Ile Pro Lys Ile Ala Ser Tyr Pro  
1                  5                         10

<210> 3  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<220>  
<221> MOD\_RES  
<222> (2)..(2)  
<223> Gly, Ser, Thr or Val

<220>  
<221> MOD\_RES  
<222> (6)..(6)  
<223> Gly or absent

<400> 3  
Phe Xaa Pro Arg Leu Xaa  
1                  5

<210> 4  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<220>  
<221> MOD\_RES  
<222> (2)..(2)  
<223> Gly, Ser, Thr or Val

<400> 4  
Phe Xaa Pro Arg Leu Gly  
1                  5

<210> 5  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
<221> MOD\_RES  
<222> (2)..(2)  
<223> Gly, Ser, Thr or Val

<400> 5  
Phe Xaa Pro Arg Leu  
1 5

<210> 6  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 6  
Glu Thr Gly Gly His Ser Leu Lys Ala Met Thr Leu Leu Thr Lys Ile  
1 5 10 15

<210> 7  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 7  
Ser Leu Gly Gly Asp Ser Ile Lys Gly Ile Gln Met Ala Ser Arg Leu  
1 5 10 15

<210> 8  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 8  
Met Ile Gly Gly His Ser Leu Lys Ala Met Met Met Thr Ala Lys Ile  
1 5 10 15

<210> 9  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<400> 9  
Asp Leu Gly Gly His Ser Leu Lys Gly Met Met Leu Ile Ala Asn Ile  
1                   5                   10                   15

<210> 10  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<400> 10  
Ser Leu Gly Gly Asp Ser Ile Lys Gly Ile Gln Met Ala Ser Arg Leu  
1                   5                   10                   15

<210> 11  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<400> 11  
Leu Cys Gly Gly Lys Ser Thr Leu Gln Asn Glu Leu Ile Gly Glu Leu  
1                   5                   10                   15

<210> 12  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<400> 12  
Ser Leu Gly Gly Asp Ser Ile Gln Ala Ile Gln Val Val Ala Arg Leu  
1                   5                   10                   15

<210> 13  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<400> 13  
Thr Leu Gly Gly His Ser Leu Lys Ala Ile Gln Leu Ile Ser Arg Ile  
1                   5                                   10                           15

<210> 14  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<400> 14  
Glu Leu Gly Gly His Ser Leu Lys Ala Met Thr Val Val Ala Gln Val  
1                   5                                   10                           15

<210> 15  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<400> 15  
Glu Leu Gly Gly Asp Ser Ile Lys Ala Ile Gln Val Ser Thr Arg Leu  
1                   5                                   10                           15

<210> 16  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<400> 16  
Asp Leu Gly Gly His Ser Leu Lys Ala Met Thr Val Val Phe Gln Val  
1                   5                                   10                           15

<210> 17

<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<400> 17  
Glu Leu Gly Gly His Ser Leu Lys Ala Met His Val Ile Ser Leu Leu  
1               5                   10                           15

<210> 18  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<400> 18  
Gln Ile Gly Gly His Ser Leu Lys Ala Met Ala Val Ala Ala Gln Val  
1               5                   10                           15

<210> 19  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<400> 19  
Glu Ile Gly Gly His Ser Leu Lys Ala Met Asn Val Ile Thr Gln Val  
1               5                   10                           15

<210> 20  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<400> 20  
Ala Leu Gly Gly His Ser Leu Arg Ala Met Arg Val Leu Ser Ser Met  
1               5                   10                           15

<210> 21  
<211> 16

<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<400> 21  
Glu Leu Gly Gly His Ser Leu Lys Ala Thr Leu Leu Ile Ala Lys Val  
1 5 10 15

<210> 22  
<211> 80  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 22  
Lys Lys Lys Ala Leu Leu Val Val Ser Phe Gly Thr Ser Tyr Lys Asp  
1 5 10 15

Thr Cys Glu Lys Asn Ile Val Ala Cys Glu Arg Asp Leu Ala Ala Ser  
20 25 30

Cys Pro Asp Arg Asp Leu Phe Arg Ala Phe Thr Ser Gly Met Ile Ile  
35 40 45

Arg Lys Leu Arg Gln Arg Asp Gly Ile Asp Ile Asp Thr Pro Leu Gln  
50 55 60

Ala Leu Gln Lys Leu Ala Ala Gln Gly Tyr Gln Asp Val Ala Ile Gln  
65 70 75 80